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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,973	01/16/2004	James Stoffer	2416.001US1	6511
21186 7590 10/29/2008 SCHWEGMAN, LUNDBERG & WOESSNER, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402				
EXAMINER				
FEELY, MICHAEL J				
ART UNIT		PAPER NUMBER		
1796				
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10/29/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/758,973

**Applicant(s)**

STOFFER ET AL.

**Examiner**

Michael J. Feely

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20080703
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Continuation of Disposition of Claims: Claims pending in the application are

4, 6, 14, 16-20, 26-28, 38-41, 46-48, 65, 66, 68-71, 74-79, 83-86, 89-91, 95, 113, 119, 120, 123-127, 131-138 and 141-150.

Continuation of Disposition of Claims: Claims rejected are

4, 6, 14, 16-20, 26-28, 38-41, 46-48, 65, 66, 68-71, 74-79, 83-86, 89-91, 95, 113, 119, 120, 123-127, 131-138 and 141-150.

**DETAILED ACTION**

***Pending Claims***

Claims 4, 6, 14, 16-20, 26-28, 38-41, 46-48, 65, 66, 68-71, 74-79, 83-86, 89-91, 95, 113, 119, 120, 123-127, 131-138, and 141-150 are pending.

***Response to Amendment***

1. The rejection of claims 1, 24, 25, 63, 67, 96, 102, 115, 116, and 139, under 35 U.S.C. 102(b) as being anticipated by Boyd et al. (US Pat. No. 5,871,839) has been rendered moot by the cancellation of these claims.
2. The rejection of claims 14, 16, 18-20, 26, 28, 70, 71, 120, 125, 134, 141, and 145 under 35 U.S.C. 102(b) as being anticipated by Boyd et al. (US Pat. No. 5,871,839) has been overcome by amendment.
3. The rejection of claim 100 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Boyd et al. (US Pat. No. 5,871,839) has been rendered moot by the cancellation of this claim.
4. The rejection of claims 68, 69, 126, 127, and 147 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Boyd et al. (US Pat. No. 5,871,839) has been overcome by amendment.
5. The rejection of claim 117 under 35 U.S.C. 103(a) as being unpatentable over Boyd et al. (US Pat. No. 5,871,839) has been rendered moot by the cancellation of this claim.
6. The rejection of claims 17, 27, 113, and 131-133 under 35 U.S.C. 103(a) as being unpatentable over Boyd et al. (US Pat. No. 5,871,839) has been overcome by amendment.

7. The rejection of claims 1, 63, 67, 72, 80, 92, 96, 101-104, and 139 under 35 U.S.C. 102(b) as being anticipated by Krueger (US Pat. No. 4,522,879) has been rendered moot by the cancellation of these claims.
8. The rejection of claims 14, 16, 18, 28, 65, 66, 70, 71, 74-79, 120, 125, 141, and 142 are rejected under 35 U.S.C. 102(b) as being anticipated by Krueger (US Pat. No. 4,522,879) has been overcome by amendment.
9. The rejection of claim 100 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Krueger (US Pat. No. 4,522,879) has been rendered moot by the cancellation of this claim.
10. The rejection of claims 68, 69, 126, 127, 147, and 148 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Krueger (US Pat. No. 4,522,879) has been overcome by amendment.
11. The rejection of claims 1, 5, 45, 56, 63, 72, 81, 87, 96, 100-102, 139, and 140 under 35 U.S.C. 103(a) as being unpatentable over Hagiwara et al. (US 2002/0193485) has been rendered moot by the cancellation of these claims.
12. The rejection of claims 6, 19, 20, 38, 40, 46-48, 65, 76-79, 84-86, 90, 91, 113, 120, 123-127, 131, 132, 135-138, 141-144, and 147-150 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagiwara et al. (US 2002/0193485) has been overcome by amendment.
13. The rejection of claims 1, 24, 25, 63, 67, 72, 80, 96, 100-102, 115-117, and 139 under 35 U.S.C. 103(a) as being unpatentable over Furuya et al. (US 2002/0082338) has been rendered moot by the cancellation of these claims.

14. The rejection of claims 4, 16-18, 65, 68-71, 76-79, 113, 120, 125-127, 131, 132, 141, and 145-147 under 35 U.S.C. 103(a) as being unpatentable over Furuya et al. (US 2002/0082338) has been overcome by amendment.
15. The rejection of claims 17, 27, 113, 131, and 132 under 35 U.S.C. 103(a) as being unpatentable over Krueger (US Pat. No. 4,522,879) has been overcome by amendment.
16. The indicated allowability of claims 26, 39, 41, 83, 89, 95, 119, 133, 134, 145, and 146 is withdrawn.

### ***Claim Groups***

The instant claims are grouped into the following related inventions by independent claim:

- Group 1: *Coating composition* of independent claim 26 and dependent claims 4, 6, 14, 16-20, 27, 28, 38, 46-48, 120, 124-127, and 131-133.
- Group 2: *Coating composition* of independent claim 39 and dependent claim 40.
- Group 3: *Coating composition* of independent claim 41.
- Group 4: *Coating composition* of independent claim 119.
- Group 5: *Method of coating composition preparation* of independent claim 95.
- Group 6: *Coating system* of independent claim 83 and dependent claims 84-86, 136, 143, and 149.
- Group 7: *Coating system* of independent claim 89 and dependent claims 90, 91, 123, 137, 138, 144, and 150.
- Group 8: *Coating system* of independent claim 134 and dependent claims 65, 66, 68-71, 141, and 147.

- Group 9: *Coating system* of independent claim 145.
- Group 10: *Coating system* of independent claim 146 and dependent claims 74-79, 135, 142, and 148.

***Claim Rejections - 35 USC § 103***

17. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

18. Independent claim 26 and dependent claims 6, 14, 16-20, 27, 28, 38, 46-48, 120, 124-127, and 131-133 (*of Group 1*); independent claim 95 (*Group 5*); and independent claim 134 and dependent claims 68-70, 141, and 147 (*of Group 8*) are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagiwara et al. (US Pat. No. 6,630,523).

Regarding the Group 1 claims, Hagiwara et al. disclose an obvious variation of the instantly claimed coating composition (*see column 2, lines 18-28; column 3, line 41 through column 5, line 28*). The details regarding the *carbon pigments* are set forth in column 3, lines 45-47. The details regarding the *extenders* are set forth in column 3, lines 47-49 & 49-53 (*see calcium phosphate*). The details regarding the *binders* are set forth in column 3, lines 59-64 and column 4, lines 20-37. The details regarding the *rare earth compounds* are set forth in column 3, lines 49-58. The details regarding the *corrosion co-inhibitors* are set forth in column 3, lines 49-58.

Hagiwara et al. fail to explicitly disclose the instantly claimed combination of materials. Rather, they disclose a *pigment mixture* (*see column 2, lines 18-28; column 3, lines 41-58*). These mixtures include: color pigments, including *carbon black*; phosphate anticorrosive

pigments, including *calcium phosphate*; and *cerium* anticorrosive pigments. Furthermore, they disclose that *mixtures of two or more of these pigments* can be used.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the instantly claimed pigment combination because the composition of Hagiwara et al. contemplates all of these pigment materials, including *mixtures of two or more of these pigments*.

Regarding the instantly claimed pigment concentrations, it can be established from the teachings of Hagiwara et al. that the amounts of these materials are result-effective variables. Specifically, the amount if carbon black would have been controlled to achieve a desired degree of coloring, the amounts of extender and rare earth pigments would have been controlled to achieve a desired degree of anticorrosion property; and the PVC would have been controlled to achieve a desired degree of dispersion. In light of this, it has been found that, “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation,” – *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955); and “A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation,” – *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the pigment concentrations, as claimed, in the composition of Hagiwara et al. because it can be established from the teachings of Hagiwara et al. that the amounts of these materials are result-effective variables.



Regarding the binder limitation of claim 20, this is a future intended use limitation, wherein the epoxy of Hagiwara et al. is inherently capable of being amine-cured.

Regarding the limitation of claim 133, this limitation is not explicitly required because the scope of the claim is open to the list of extenders set forth in claim 26.

Regarding the Group 5 claim, the teachings of Hagiwara et al. are as set forth above and incorporated herein to obviously satisfy the instant invention.

Regarding the Group 8 claims, the teachings of Hagiwara et al. are as set forth above and incorporated herein. The details of the *curing mechanism* are set forth in column 5, lines 20-28. The details of the *coating technique(s)* are set forth in column 5, lines 8-19. The details of the *substrate* are set forth in working examples. The details of the *coating system* are set forth in claim 5, lines 1-7.

19. Independent claim 119 (*of Group 4*); and independent claim 83 and dependent claims 84-86, 136, 143, and 149 (*of Group 6*) are rejected under 35 U.S.C. 103(a) as being unpatentable over McCollum et al. (US 2003/0054193).

Regarding the Group 4 claim, McCollum et al. disclose an obvious variation of the instantly claimed coating composition (*see Abstract; paragraphs 0130-0140*). They disclose a pigment paste (*see paragraphs 0130-0138*), which includes: rare earth materials, such as rare earth oxides (*see paragraphs 0130 & 0132*) and conventional pigments additives, such as carbon black (*see paragraph 0138*). They also disclose a binder (*see Abstract; paragraph 0140*).

McCollum et al. fail to explicitly disclose the use of *praseodymium(III/IV) oxide*; however, the disclosure of *rare earth oxides* obviously embraces *praseodymium(III/IV) oxide*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use *praseodymium(III/IV) oxide* in the composition of McCollum et al. because they disclose the use of rare earth oxides. The disclosure of *rare earth oxides* would have obviously embraced *praseodymium(III/IV) oxide*.

Regarding the Group 6 claims, the teachings of McCollum et al. are as set forth above and incorporated herein. The details of the *pretreatment* are set forth in paragraphs 0096-0097. The details of the *top-coat*, including *urethane-based topcoats*, are set forth in paragraphs 0150-0155, particularly paragraph 0151. The details of the *curing mechanism* are set forth in paragraphs 0096-0097. The details of the *coating technique(s)* are set forth in paragraphs 0096-0097. The details of the *system-type* are set forth in paragraphs 0044, 0096, and 0097. The details of the *substrate type* are set forth in paragraphs 0028-0032, particularly paragraph 0028.

20. Independent claim 39 and dependent claim 40 (*of Group 2*); independent claim 41 (*of Group 3*), independent claim 95 (*of Group 5*); independent claim 89 and dependent claims 90, 91, 123, 137, 138, 144, and 150 (*of Group 7*); independent claim 134 and dependent claims 65, 66, 68-71, 141, and 147 (*of Group 8*); independent claim 145 (*of Group 9*); and independent claim 146 and dependent claims 74-79, 135, 142, and 148 (*of Group 10*) are rejected under 35 U.S.C. 103(a) as being unpatentable over McCollum et al. (US 2003/0054193) in view of Hagiwara et al. (US Pat. No. 6,630,523).

Regarding the Group 2, 3, and 5 claims, the individual teachings of McCollum et al. and Hagiwara et al. are as set forth above and incorporated herein. Furthermore, the analogous nature of McCollum et al. and Hagiwara et al. is as set forth above and incorporated herein. The

pigment combination of McCollum et al. fails to explicitly disclose the instantly claimed extender. Rather, they contemplate the use of *supplemental corrosion inhibiting inorganic components* (see paragraph 0134) and *supplemental conventional pigments* (see paragraph 0138).

Hagiwara et al. disclose that pigment mixtures, similar to the one set forth in McCallum et al., can feature a variety of pigment materials including extenders and phosphate anticorrosive pigments, such as *calcium phosphate* (see column 3, lines 41-58). The teachings of Hagiwara et al. demonstrate that these materials, particularly phosphate anticorrosive pigments (*including calcium phosphate*) are recognized in the art as *supplemental corrosion inhibiting inorganic components* and *supplemental conventional pigments* in this type of pigment mixture and coating composition. In light of this, it has been found that the selection of known material based on its suitability for its intended use supports a *prima facie* obviousness determination – see *MPEP 2144.07*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add the instantly claimed extender, as taught by Hagiwara et al., to the pigment mixture and coating composition of McCollum et al. because the teachings of Hagiwara et al. demonstrate that these materials, particularly phosphate anticorrosive pigments (*including calcium phosphate*) are recognized in the art as *supplemental corrosion inhibiting inorganic components* and *supplemental conventional pigments* in this type of pigment mixture and coating composition.

Regarding the Group 7-10 claims, the combined teachings of McCollum et al. and Hagiwara et al. are as set forth above and incorporated herein. The details of the *pretreatment*

are set forth in paragraphs 0096-0097 of primary teachings of McCollum et al. The details of the *top-coat*, including *urethane-based topcoats*, are set forth in paragraphs 0150-0155, particularly paragraph 0151 of primary teachings of McCollum et al. The details of the *curing mechanism* are set forth in paragraphs 0096-0097 of primary teachings of McCollum et al. The details of the *coating technique(s)* are set forth in paragraphs 0096-0097 of primary teachings of McCollum et al. The details of the *system-type* are set forth in paragraphs 0044, 0096, and 0097 of primary teachings of McCollum et al. The details of the *substrate type* are set forth in paragraphs 0028-0032, particularly paragraph 0028 of primary teachings of McCollum et al. The details of the *binder* are set forth in paragraphs 0045-0052 of primary teachings of McCollum et al. The details of the *additives* are set forth in paragraphs 0137-0138.

21. Dependent claim 4 (*of Group I*) is rejected under 35 U.S.C. 103(a) as being unpatentable over Hagiwara et al. (US Pat. No. 6,630,523) in view of McCollum et al. (US 2003/0054193) and Furuya et al. (US 2002/0082338).

The combined teachings and analogous nature of Hagiwara et al. and McCollum et al. are as set forth above and incorporated herein. The teachings of McCollum et al. demonstrate that surfactants and wetting agents (*see paragraph 0138*) are recognized in the art as suitable additives for this type of coating composition. In light of this, it has been found that the selection of known material based on its suitability for its intended use supports a *prima facie* obviousness determination – *see MPEP 2144.07*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a surfactant or wetting agent in the composition of Hagiwara et al. because the

teachings of McCallum et al. demonstrate that surfactants and wetting agents are recognized in the art as suitable additives for this type of coating composition.

Furthermore, it should be noted that the teachings of Furuya et al. demonstrate that *amino acid* type surfactants are conventional and well-known surfactants for aqueous based coating compositions (*see paragraphs 0102-0103*). Accordingly, these materials would have been obvious surfactant candidate for the combined teachings of Hagiwara et al. and McCollum et al.

### ***Claim Rejections - 35 USC § 112***

22. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

23. Claims 84 and 136 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 84 and 136 recite the limitation "the one or more binders" in the composition of claim 83. There is insufficient antecedent basis for this limitation in the claim.

### ***Conclusion***

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Singer et al. (US Pat. No. 5,814,410) is cited by McCollum et al. as a suitable top-coating material (*see paragraph 0151 of McCollum et al.*).

*Communication*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is (571)272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Feely/  
Primary Examiner, Art Unit 1796

October 27, 2008